

## ABSTRACT

[0143] The invention concerns a wide range of diseases and conditions, including cancers. The invention provides a probe for detection of such a disease or condition. The probe is able to distinguish between functional P2X<sub>7</sub> receptors and non-functional P2X<sub>7</sub> receptors. The probe can do this in various ways, one of which is detecting change in relation to binding of adenosine triphosphate (ATP) to the receptors.

[0144] The invention also provides a method for detecting the disease or condition, using the probe.

[0145] The invention extends to treatment of the disease or condition, using an antibody, or an epitope capable of generating the antibody, which can distinguish between functional and non-functional P2X<sub>7</sub> receptors and bind to the non-functional receptors.

[0146] Methods of treatment, pharmaceutical compositions and use of the probe and antibody are also included.